Exercise 1 *Let f be a function defined by $f(x) = x^3$ and g be a function defined by $g(x) = \dfrac{1}{x^3}$. Use the pair of functions f and g to find the following values, if they exist. If the value does not exist, enter DNE.*

(a) $(f+g)(2) = \boxed{\dfrac{65}{8}}$

(b) $(f-g)(-1) = \boxed{0}$

(c) $(g-f)(1) = \boxed{0}$

(d) $(f \cdot g)\left(\dfrac{1}{2}\right) = \boxed{1}$

(e) $\left(\dfrac{f}{g}\right)(0) = \boxed{DNE}$

(f) $\left(\dfrac{g}{f}\right)(-2) = \boxed{\dfrac{1}{64}}$